

## COMPOSITE COLD PLATE ASSEMBLY

### ABSTRACT

A cooling fluid distribution assembly for a plurality of electronic modules, using a composite cold plate structure. One cold plate is associated with each electronic module  
5 requiring liquid cooling. Each cold plate includes a high thermal conductivity base sealably fastened to a cover, the cover having at least one fluid inlet and at least one fluid outlet. Cover fluid inlets and outlets are connected via a plurality of flexible, nonmetallic conduits, the conduits being bonded to the cover inlets and outlets. Each cold plate cover is formed of a material that is capable of being bonded to the flexible, nonmetallic conduits, covers are  
10 therefore formed of a different material than the material comprising the cold plate base. Cold plate structures preferably include internal fluid distribution structures. The resulting cooling fluid distribution assembly provides reliable fluid connections and is sufficiently flexible to adjust for variances in module height etc.